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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,713	04/14/2004	Kuang-Yu Wang	SUP-005	9208
22888 7590 08/02/2007 BEVER HOFFMAN & HARMS, LLP TRI-VALLEY OFFICE 1432 CONCANNON BLVD., BLDG. G LIVERMORE, CA 94550			EXAMINER BUI, HUNG S	
			ART UNIT 2841	PAPER NUMBER
			MAIL DATE 08/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/825,713

Applicant(s)

WANG ET AL.

Examiner

Hung S. Bui

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 20-32 is/are pending in the application.
- 4a) Of the above claim(s) 6-8, 11, 13, 14, 22, 25-27, 29, 31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9, 10, 12, 20, 21, 23, 24, 28 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/14/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Oath/Declaration***

1. The oath/declaration filed on 04/14/2004 is acceptable.

***Information Disclosure Statement***

2. The IDS filed on 04/14/2004 and 11/09/2004 have been considered and made of record.

***Drawings***

3. The drawings are objected to because the figures 6 and 8a-8b have shade therein the figures. The figures 6 and 8a-8b are better without the shade therein the figures; for example, in the figure 8b, the shade covers all area inside a peripheral frame 621(A)-(C) and 621(B)-621(D). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after

Art Unit: 2841

the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5, 10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Simmons et al. [US 6,947,288].

Examiner considered a top panel 11 of the Simmons' reference as a bottom cover and a bottom panel 19 of the Simmons' reference as an upper cover.

**Regarding claim 1**, Simmons et al. disclose a card type electronic apparatus (10, figure 2, column 3, line 35) comprising:

- a printed circuit board assembly (14, figure 2, column 3, line 39) assembly (PCBA);

Art Unit: 2841

- an upper cover (19, figure 2, column 3, line 45) comprising a plurality of upper sidewalls (sidewalls extended therefrom the top of the upper cover as shown in figure 2) extending substantially perpendicularly from a top exterior surface of the upper cover, each of the plurality of upper sidewalls including an upper mating feature (tabs 61, figure 6, column 5, line 19); and
- a lower cover (11, figure 2, column 3, line 40) comprising a plurality of lower mating features (channel 34, figure 6, column 5, line 19) and at least two lower sidewalls (see figure 6), the at least two lower sidewalls extending substantially perpendicularly from a bottom exterior surface of the lower cover, the plurality of lower mating features being inboard of the at least two lower sidewalls (see figures 1-2 and 6),
- wherein the plurality of upper mating features are ultrasonically welded (figure 6, column 5, lines 10-13) to the plurality of lower mating features, and
- wherein the upper cover and the lower cover enclose the PCBA.

**Regarding claim 2**, Simmons et al. disclose wherein at least two lower sidewalls completely surround the upper cover (figures 1 and 6).

**Regarding claim 3**, Simmons et al. disclose wherein at least two lower sidewalls partially surround the upper cover (see figure 1).

**Regarding claim 4**, Simmons et al. disclose wherein the at least two lower sidewalls form a slip fit with the upper cover (the tabs 61 being inserted/slip fit into the channel of the upper cover, as shown in figure 6).

**Regarding claim 5**, Simmons et al. disclose wherein the at least two lower sidewalls form an interference fit with the upper cover (see figure 6).

**Regarding claim 10**, Simmons et al. disclose each of the at least two lower sidewalls including a top surface (the two sidewalls of the lower cover include two channels 34, figure 6, wherein each channel has a pair of sidewalls 64, figure 6; and each sidewall channel defines a top surface) cooperating with the least two surfaces of the upper cover (see figure 6).

**Regarding claim 12**, Simmons et al. disclose the card type electronic apparatus being a memory stick card (column 1, lines 21-22).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons et al. in view of Ramey et al. [US 5,505,628].

**Regarding claim 9**, Simmons et al. disclose the PCBA comprises one or more integrated circuits (Note: it's a well known in the art for a PC card have to include an integrated circuits thereon.)

Simmons et al. disclose the instant claimed invention except for the lower cover comprising one or more support structures, the one or more support structure being in contact with one or more unpopulated regions on the PCB.

Ramey et al. disclose a memory card (figure 13) having first and second covers (110, 111, figure 13), wherein one of the covers includes at least one or more support structure (131, figure 13) contacts with one or more unpopulated regions on a printed circuit board (116, figure 13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the structure support design of Ramey et al. in Simmons et al., for the purpose of preventing vibration of the printed circuit board in the casing of the PC card.

8. Claims 20-21, 24, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons et al. in view of Kung et al. [US 6,692,268].

**Regarding claims 20 and 24**, Simmons et al. disclose a card type electronic apparatus (10, figure 2, column 3, line 35) comprising:

- a printed circuit board assembly (14, figure 4, column 3, line 39, PCBA);
- an upper cover (19, figure 2, column 3, line 45); and wherein the upper cover comprises a plurality of upper sidewalls (34, figure 6) extending substantially perpendicularly from an upper exterior surface of the upper cover (as claim 24);

Art Unit: 2841

- a lower plastic cover (11, figure 2, column 3, lines 39-40), the lower plastic cover comprising a plurality of lower sidewalls extending substantially perpendicularly from a bottom exterior surface of the lower plastic cover, the plurality of lower sidewalls defining a pocket (channel 34, figure 6),
- wherein the upper cover is permanently (the upper cover is ultrasonically welded with the lower plastic cover, column 5, line 10-13) attached to the lower plastic cover at a seam within the pocket;
- wherein the upper cover and the lower cover enclose the PCBA.

Simmons et al. disclose the instant claimed invention except for the upper cover being formed of a plastic.

Kung et al. disclose a PC card (figure 1, column 2, line 13) including a top plastic cover and a bottom plastic cover (see abstract lines 1-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use plastic material to make the upper cover of Simmons et al., as suggested by Kung et al., for the purpose of reducing weight of the portable memory card.

**Regarding claim 21**, Simmons et al. disclose wherein at least two lower sidewalls completely surround the upper cover (figures 1 and 6).

Simmons et al. disclose the instant claimed invention except for the upper cover being formed of a plastic.

Kung et al. disclose a PC card (figure 1, column 2, line 13) including a top plastic cover and a bottom plastic cover (see abstract lines 1-3).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to use plastic material to make the upper cover of Simmons et al., as suggested by Kung et al., for the purpose of reducing weight of the portable memory card.

**Regarding claim 28**, Simmons et al. disclose each of the plurality of the lower sidewalls including a top surface (the two sidewalls of the lower cover include two channels 34, figure 6, wherein each channel has a pair of sidewalls 64, figure 6; and each sidewall channel defines a top surface) cooperating with the least two surfaces of the upper cover (see figure 6).

Simmons et al. disclose the instant claimed invention except for the upper cover being formed of a plastic.

Kung et al. disclose a PC card (figure 1, column 2, line 13) including a top plastic cover and a bottom plastic cover (see abstract lines 1-3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use plastic material to make the upper cover of Simmons et al., as suggested by Kung et al., for the purpose of reducing weight of the portable memory card.

**Regarding claim 30**, Simmons et al., as modified, disclose the card type electronic apparatus being a memory stick card (column 1, lines 21-22).

Art Unit: 2841

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons et al., as modified, as applied to claim 20 above, and further in view of Ramey et al. [US 5,505,628].

**Regarding claim 23,** Simmons et al., as modified, disclose the instant claimed invention except for the lower plastic cover comprising a plurality of support structures, the plurality of support structures contact with unpopulated regions on the PCB.

Ramey et al. disclose a memory card (figure 13) having first and second covers (110, 111, figure 13), wherein one of the covers includes a plurality of support structures (131, figures 10 and 13) contacts with unpopulated regions on a printed circuit board (116, figure 13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the structure support design of Ramey et al. in Simmons et al., for the purpose of preventing vibration of the printed circuit board in the casing of the PC card.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-14 and 20-32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2841

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 2841

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

07/24/2007

**Hung Bui**

**Art Unit 2841**

  
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